DOCUMENT RESUME

ED 457 898 JC 010 649

AUTHOR	Bryant, Alyssa N.
TITLE	Community College Students: Recent Findings and Trends.
PUB DATE	2000-12-06
NOTE	36p.
PUB TYPE	Information Analyses (070) -- Reports - Descriptive (141)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Access to Education; *Community Colleges; *Educational Change; *Educational Trends; Employment; *Enrollment; *Enrollment Projections; Futures (of Society); Outcomes of Education; *Student Characteristics; Transfer Rates (College); Two Year Colleges

ABSTRACT

This paper discusses recent trends and issues in community colleges, such as dual enrollment, reverse transfer, post-college earnings, and student involvement and experiences within community colleges. It also provides statistics on minority, female, and nontraditional student enrollment, transfer rates, and student success. Highlights include: (1) enrollment in community colleges between 1965 and 1996 increased by 369%; (2) enrollment between 1996 and 2008 (a period known as Tidal Wave Two) is expected to increase by approximately 10 percent; (3) minority enrollment increased from 24% to 32% between 1990 and 1997; (4) age is a selection factor in nearly one-third of community colleges, and about half use test scores and "ability to benefit" as admission criteria; (5) 66% of 87,000 students surveyed reported that their original goal in entering community college was to earn either a certificate/degree or transfer credit to a four-year institution; (6) community colleges enroll 44% of all college students; (7) women compose 58% of community college enrollees; (8) national transfer rates have clustered consistently around 22% since 1984; (9) 20- to 24-year-old students had the highest withdrawal rates, while students aged 60 to 64 had the lowest; and (10) the number of high school students enrolling in two-year colleges increased from 96,913 in 1993 to 123,039 in 1995. Contains 52 references. (EMH)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 457 898

Community College Students: Recent Findings and Trends

Alyssa N. Bryant

December 6, 2000

Education 263: The Community College

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Alyssa N. Bryant.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

JC010649

BEST COPY AVAILABLE

Community colleges are centers of opportunity. For some students these institutions provide entry into the system of higher education that, because of financial constraints or deficiencies in academic opportunity or ability, would otherwise not be available. For others, community colleges provide a second chance. This is seen in the case of adults who return to college to secure degrees never earned, or in the case of students entering community colleges after unsuccessful experiences within four-year institutions.

Community colleges are diverse. Students of color comprise 30 percent of the student body in the nation's community colleges, and women make up the majority of community college enrollees (58 percent). Student age also contributes to diversity on community college campuses; non-traditional college students, namely adults, may enroll as part-timers in order to accommodate their work schedules and family responsibilities. Similarly, ambitious individuals still in high school are enrolling in community colleges as a way of completing college credit early (Phillippe, 1999).

Student intentions, like the students themselves, are also quite varied and include goals related to transferring to senior institutions, strengthening vocational skills and credentials, and benefiting from life-long learning. Student success is clearly difficult to assess, as their objectives are not consistently clear.

Student Enrollment

Enrollment increased in community colleges between 1965 and 1996 by 368.7 percent, with most of the growth accounted for by the vast expansion in higher education between 1965 and 1975. A more recent perspective shows that student enrollment in all institutions of higher education saw greater increases during the period between 1984 and 1990 (12.9 percent change) compared to the period between 1990 and 1996 (3.5 percent change). This phenomenon is

reflected in the enrollment pattern for community colleges. Between 1984 and 1990 enrollment experienced a 15.7 percent increase, while between 1990 and 1996 the change was 4.9 percent (Phillippe, 1999). The National Center for Education Statistics (1999, Table 181) reports that enrollment in two-year institutions of higher education declined very slightly between 1996 and 1997, from 5,497,420 to 5,470,740, a difference of nearly 27,000 students (The comparable figure for all degree awarding institutions – which includes institutions of higher education and degree-awarding proprietary schools – increased from 5,563,327 to 5,605,569 between 1996 and 1997). While this decline is not practically significant, this and the above data suggest that, in light of the dramatic growth during the 1960's in community college enrollment (and in institutions of higher education overall), enrollment during the 1990's was relatively constant. Wilds (2000) describes the years between 1991 and 1997 as a period of stagnation, and attributes this constancy to the decline, by 3.1 percent since 1993, of White college enrollees.

Though growth in numbers is not as substantial as it was three decades ago, this is not to say that the population of students enrolling in community colleges is static and unchanging. On the contrary, Tidal Wave Two, quickly approaching, will provide institutions of higher education with an influx of the18- to 24-year-old children of the Baby Boomers. As Table 1 illustrates, the percentage of 18- to 24-year-olds in the nation enrolling in institutions of higher education (of all types) remained stable through much of the 1990's, with the change between 1990 and 1998 equaling a mere 1.4 percent. Still, the 1998 figure, 36.5 percent, suggests that a considerable proportion of the 18- to 24-year-old population in the United States is served by institutions of higher education. The projected increase in the traditional college-age population enrolling in higher education is expected to offset declines in older student enrollment between 1996 and

2008. Community college enrollment is expected to increase over this twelve-year span by approximately 10 percent, with sizable shifts expected in age composition (Gerald, 1998).

Table 1. *Percentage of the Eighteen- to Twenty-Four-Year-Old Population in the United States Enrolled in Institutions of Higher Education, 1970 to 1998.*

Year	Percentage	Year	Percentage
1970	25.7	1993	34.6
1975	26.3	1994	34.3
1980	25.7	1995	34.3
1985	27.8	1996	35.5
1990	32.1	1997	36.8
1991	33.3	1998	36.5
1992	34.4		

Source: National Center for Education Statistics, 1999, Table 189.

Shifts in the percentage of minority students served by community colleges can also be expected based on current trends in the 1990's. Minority enrollment increased from 23.6 to 31.8 percent, a 35 percent change, between 1990 and 1997. Compare this seven-year span to the twenty-one-year period between 1976 and 1997, when minority enrollment increased by 61 percent (National Center for Education Statistics, 1999, Table 209). Thus, enrollment rates must be understood in terms of changes to the student body. While the actual enrollment rates are not as spectacular as in the mid -1960's, upward growth prevails and notably, the identity of community college enrollees also continues to fluctuate.

Cohen & Brawer (1996) attribute enrollment growth in community colleges to older students' participation; the availability of financial aid; a rise in part-time attendance; the reclassification of institutions; the redefinition of students and courses; the high attendance of

low-ability students, women, and minorities; and aggressive recruitment on the part of community colleges. Certainly these factors continue to create shifts in enrollment. Already the increase in the enrollment of women and minorities has been noted as an important factor in community college growth. Older student participation, as mentioned above, is expected to decline at the onset of the 21st century. This can be seen by comparing the mean age for community college students in 1999, 29 years-of-age (American Association of Community Colleges, 1999), with the 1991 figure reported by Cohen & Brawer: 31 years-of-age. The modal age, 19, has remained unchanged, though the median age has declined from Cohen & Brawer's reported 25 years-of-age to 23 (National Center for Education Statistics, 1999, Table 179). Part-time enrollment reached a high of approximately 64 percent of total community college enrollment in 1997 (see Table 2). Clearly, the endorsement of part-time status on the part of the two-year colleges allows for those with job or family constraints to enroll in college. Table 3 shows that older students (35 and older) make up a greater percentage of part-time enrollees than full-time enrollees. Percentage of part-timers remained stable (and high) during the 1990's. Perhaps the expected influx of traditional-age students will contribute to an increase in the percentage of full-time enrollees, though this remains to be seen.

Table 2. *Part-Time Enrollments as a Percentage of Total Enrollments in Two-Year Institutions of Higher Education, 1970 to 1997.*

Year	Total Fall Enrollments	Part-Time Enrollments	Percent
1970	2,319,385	1,090,474	47
1975	3,970,119	2,209,041	56
1980	4,526,287	2,772,492	61
1985	4,531,077	2,840,470	63
1990	5,240,083	3,356,121	64
1993	5,565,867	3,522,548	63
1994	5,529,710	3,497,996	63
1995	5,492,529	3,515,482	65
1996	5,497,420	3,510,798	64
1997	5,470,740	3,475,028	64

Source: National Center for Education Statistics, 1999, Table 181.

Table 3. *Distribution by Age and Attendance Status in Community Colleges, 1999.*

Age	Percentage Full-Time	Percentage Part-Time
<19	38.3	14.6
20-34	50.2	52.4
35-49	8.6	24.4
50-64	1.2	5.6
>64	0.1	1.7
Unknown	1.5	1.3

Source: National Center for Education Statistics, 1999, Table 179.

Student Access and the Community College Mission

The development of community colleges served to offer universal access that could not be realized in the selective four-year colleges and universities. The two-year college, with its flexibility and open admissions, has provided opportunities for disadvantaged individuals who might otherwise not attend college (Fusch, 1996). Though flexible standards attract students, Nettles & Millett (2000) suggest that universal accessibility forces community college institutions to defend their identity as colleges. Critics of the two-year colleges charge that instruction is at the high school level. In addition, student achievement and academic preparation are difficult to assess when admissions requirements are few or non-existent. While entrance exams may be administered by community colleges, the results are often used solely for placement purposes and are not reported alongside other student demographics. The lack of data leads many to wonder about the academic ability of entering community college students; if little is known about them at the start, it follows that outcome assessments will be fruitless without a basis for comparison – the student characteristics at entry. This leads back to the initial dilemma: Community colleges struggle to establish a legitimate standing among the other institutions of higher education that both selectively admit students and demonstrate positive student outcomes.

Table 4 examines admission criteria used for the selection of students in two-year institutions. The figures are representative of all institutions, public and private, that are eligible to participate in Title IV financial aid programs. Thus, it is likely that these data include proprietary and trade schools ("degree awarding" institutions) rather than institutions of higher education alone.

Table 4 *Admission Criteria for Selection in Two-Year Institutions of Higher Education, 1990-1999*

Criteria	Year	Percentage of Two-Year Institutions Using Criterion for Selection Purposes
High School Diploma		
	1990-91	88.3
	1995-96	88.1
	1996-97	89.8
	1997-98	89.7
	1998-99	89.4
High School Class Standing		
	1990-91	13.5
	1995-96	12.8
	1996-97	10.5
	1997-98	10.0
	1998-99	9.1
Admissions Test Scores		
	1990-91	45.6
	1995-96	46.7
	1996-97	47.6
	1997-98	47.4
	1998-99	48.6
Ability to Benefit		
	1990-91	56.0
	1995-96	54.2
	1996-97	50.0
	1997-98	49.8
	1998-99	49.2
Age		
	1990-91	27.9
	1995-96	29.7
	1996-97	28.9
	1997-98	29.4
	1998-99	29.9
Open Admission		
	1990-91	12.0
	1995-96	36.9
	1996-97	35.4
	1997-98	35.4
	1998-99	39.4

Source: National Center for Education Statistics, 1999, Table 313

Of all the factors, the high school diploma criterion is the most often considered by institutions for admission, while class standing is the least often considered. Age is a selection factor in nearly one-third of the schools, and about half of the two-year institutions use test scores and "ability to benefit" as admission criteria. Another interesting finding is the increase in the percent of open admission institutions between the 1990-91 school year and the 1998-99 school year: 12 percent to 39.4 percent. Despite this increase, fewer than half of the institutions are classified as open admission, implying that community colleges are not as open as perceived. Still, it is likely that the inclusion of private institutions and trade/proprietary schools inflate these numbers, as these schools may not be universally available to all applicants. Similarly, access to a public community college does not necessarily dictate access to all of the programs it offers. Indeed, the liberal arts courses leading to transfer may be open to anyone, but the technical or specialized programs may be selective, requiring test scores or other criteria to secure a position. Thus, if these figures encompass such a wide variety of institutions and programs, they may overestimate the use of criteria for admissions. At the same time, they clearly show a trend toward open admission and fewer entrance requirements overall.

Phelan (2000) believes that the open door policy of community colleges is "threatening to close" as a result of rising enrollments and declining public interest and investment in higher education. He suggests that policymakers consider capping enrollments, allocating funding based on student performance rather than "seat time", redefining funding strategies, utilizing placement testing, requiring remedial coursework, and restricting the enrollment of students already holding degrees.

Rendón (2000) maintains that community colleges ought to view themselves as distinct and unique, functioning for the purpose of providing access to a diverse student body. She

suggests that the focus of the community college be on educating students and encouraging students to become active and responsible citizens. Ultimately, community colleges should strive to become relationship-centered, collaborative in nature, and inclusive. Internal collaboration involves strengthening the connections between the faculty, students, and the administration; while external collaboration requires communication with feeder schools, transfer institutions, the community, businesses, and all levels of government. In a similar tone, Nora (1999) recommends that community colleges advance into the 21st century prepared for the diverse student body. She advocates motivating students to pursue higher levels of education, providing opportunities for students to fully integrate themselves into the college experience, and involving faculty more fully in the preparation and validation of students.

Overall, access for students regardless of ability or financial deprivation wanes as the 21st century begins. Community colleges are faced with widely varying needs related to the numerous and diverse student body. Pulled in many directions, the institutions must find ways to accommodate students lest the principles of democracy and universal access, on which they are based, begin to fade.

Classifying Students

Cohen & Brawer suggest that students attend community colleges for numerous reasons – to better themselves financially, to obtain job entry skills, to upgrade job skills, to fulfill a personal interest, or to take classes that will transfer to senior institutions. The common belief is that community college students are practical and are not interested in learning for its own sake. Yet Cohen & Brawer argue that students in all institutional types use education for practical purposes, financial or otherwise.

Based on a recent study of community college student intentions, Voorhees & Zhou (2000) report that, of the 87,000 students surveyed, the majority (79.2 percent) affirmed that their original intentions for enrolling in college had not changed. Of those who did change, 73.6 percent indicated changing only once. Two-thirds of the respondents (66.4 percent) reported that their original goal was to earn either a certificate/degree or transfer credit to a four-year institution. Twenty-one percent of the students enrolled in college in order to improve job skills, while 12 percent attributed their attendance to personal interests. Lords (2000) states that 18 percent of community college students enroll with the objective of acquiring computer or technical training, not far removed from the 21 percent that reported improving job skills as their goal in the Voorhees & Zhou study. Students do appear to have clear purposes for enrolling in community colleges, purposes that the majority of students remain committed to. Many of their intentions are practical in nature; however, one in ten attend for reasons related to a personal interest in learning. Interestingly, Voorhees & Zhou found only one demographic factor significantly related to changes in intentions: cumulative credit hours. There is a positive relationship between number of credits completed and number of intention shifts, and a negative relationship between number of credits completed and perceptions of goal attainment.

Community colleges, according to Cohen & Brawer, serve a large proportion of the population in this country. Of the national undergraduate population, community colleges enroll 44 percent of college students. Table 5 highlights the percentage of the population, 18 or older, served by community colleges in each state during 1996-97. Wyoming (8.9 percent), Arizona (8.6 percent), California (8.4 percent), Illinois (7.9 percent), Alabama (7.8 percent), and Washington (7.6 percent) are some of the most notable figures. However, the Community College of the Air Force, which offers classes at air bases throughout the world, is headquartered

in Alabama, inflating the percentage of students served in that state. Overall, 4.7 percent of the nation's 18 and older population attended community colleges in 1996-97.

Table 5. *Percentage of State Populations Aged Eighteen or Older Served by Community Colleges, 1996-97.*

State	Percent	State	Percent	State	Percent
Alabama	7.8	Kentucky	2.1	North Dakota	2.6
Alaska	4.3	Louisiana	1.4	Ohio	3.0
Arizona	8.6	Maine	2.0	Oklahoma	4.0
Arkansas	2.9	Maryland	4.0	Oregon	6.7
California	8.4	Massachusetts	2.7	Pennsylvania	2.1
Colorado	4.9	Michigan	4.6	Rhode Island	3.5
Connecticut	2.4	Minnesota	5.1	South Carolina	3.5
Delaware	3.1	Mississippi	4.1	South Dakota	1.5
D.C.	0.0	Missouri	3.2	Tennessee	3.1
Florida	5.2	Montana	2.2	Texas	5.5
Georgia	2.1	Nebraska	6.1	Utah	5.1
Hawaii	3.8	Nevada	5.3	Vermont	2.1
Idaho	3.3	New Hampshire	1.9	Virginia	4.1
Illinois	7.9	New Jersey	3.1	Washington	7.6
Indiana	1.6	New Mexico	7.0	West Virginia	1.6
Iowa	4.0	New York	2.9	Wisconsin	4.6
Kansas	6.6	North Carolina	4.2	Wyoming	8.9
				Total Percent	4.7

Source: National Profile of Community Colleges: Trends and Statistics, 1999, pp. 18-19.

Gender

Women make up 58 percent of community college enrollees (Phillippe, 1999) and their presence in these two-year institutions necessitates attention to their unique issues and difficulties. Johnson, Schwartz, & Bower (2000) report that high levels of stress among adult women in community colleges result from parenting, financial constraints, and health concerns. The authors suggest that community colleges provide campus day care, a specialized orientation designed specifically for adult women, academic and financial aid advising, and peer advisers in order to alleviate some of the stressors for this group of individuals. Also, the college ought to promote healthy lifestyles by supplying women with information about how to look after their own health and the health of their children. Finally, the researchers propose establishing an early warning system for adult female students so that they can anticipate and better manage problems that arise. This may take the form of an inventory or survey that measures stressors and individual capacity to respond to stress.

Persistence of adult women in community colleges is related to financial aid status, grade point average, and final goal. Non-persisters differ from persisters in that they do not successfully integrate into college, nor are they committed to obtaining a degree. The model for persistence, then, involves the integration of academic and personal spheres, the intention to make a life change, and the final goal of earning a degree (Goldsmith & Archambault, 1997).

Cohen & Brawer claim that gender differentiated fields continue to persist in community colleges. In an analysis of the Florida community college system, Windham (1997) discovered that, on the surface, it appears that women enroll in more science and math courses than their male peers. She reports that women make up 63 percent of the biological science enrollments, 55 percent of the mathematics enrollments, and 52 percent of the physical science enrollments.

However, there are courses within these disciplines that are geared toward nursing and dental hygiene students (predominantly female fields). Windham points out that as math and science content level increases in courses, female enrollment decreases. Although female enrollees comprise the majority in the biological sciences, there is indeed a higher concentration of women in the courses that lead to dental hygiene or nursing degrees, indicating that gender does continue to vary by discipline, with fewer women in the traditional science fields.

Ethnic Minorities

In 1997, 46.4 percent of the minority students enrolled in institutions of higher education, attended two-year colleges (Foote, 1997). Table 6 shows that minority students comprised 31.8 percent of the total population of community college students in 1997; in 1976 this figure equaled 19.8 percent. Hispanic students are the largest minority group represented in community colleges (12.5 percent of the student body), closely followed by Black students (11.8 percent). Asian and Pacific Islanders are less visible (6.2 percent), while American Indians and Alaskan Natives are the least visible in community colleges (1.3 percent) (See Table 7).

Table 6. *Minority Enrollment in Community Colleges, 1976-1997, (Percent of Total Enrollment).*

Year	Percentage	Year	Percentage
1976	19.8	1995	29.8
1980	20.2	1996	30.8
1990	23.6	1997	31.8

Source: National Center for Education Statistics, 1999, Table 209.

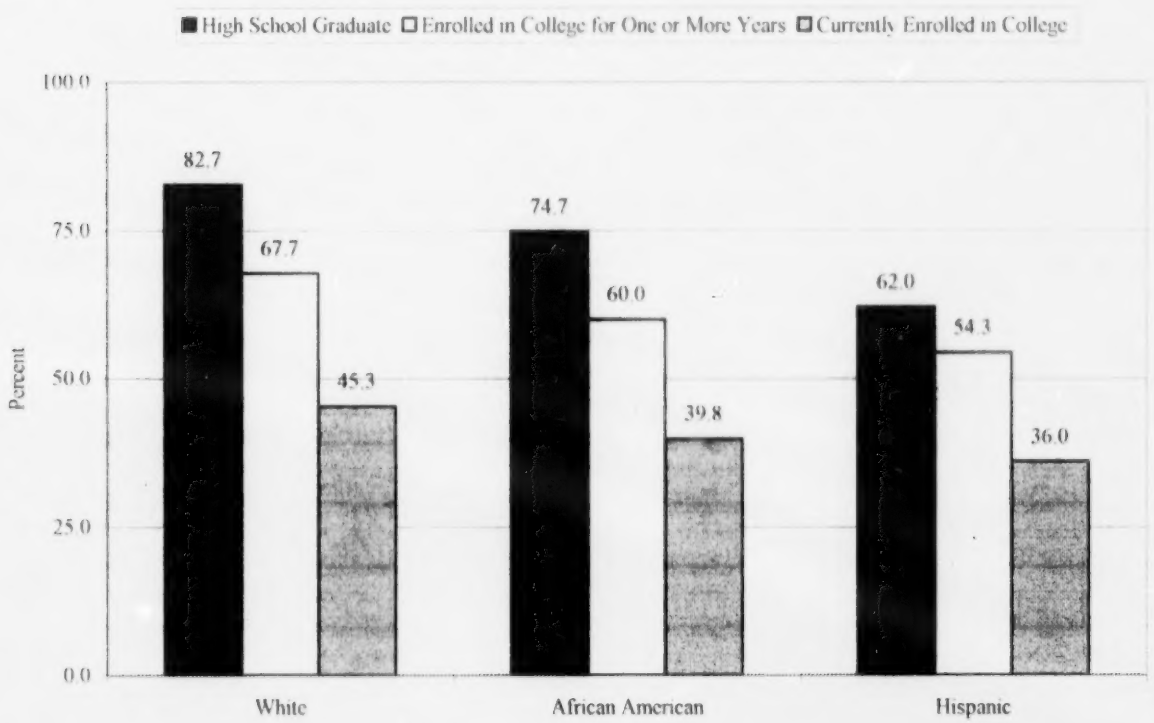
Table 7. *Minority Enrollment in Two-Year Institutions by Race Ethnicity, 1997.*

Race/Ethnicity	Percentage
White	68.2
Total Minority	31.8
Black	11.8
Hispanic	12.5
Asian/Pacific Islander	6.2
American Indian/Alaskan Native	1.3

Source: National Center for Education Statistics, 1999, Table 209.

Cohen & Brawer allude to the criticism community colleges face regarding the potential hindrances two-year institutions may place on minority students. Do community colleges offer mobility and success for these individuals, or are they merely a sidetrack, filtering minority students and the economically disadvantaged away from "real" colleges and opportunities? Certainly the point made by Cohen & Brawer, that differences between minority and White students exist at every level of educational attainment, continues to hold true. Figure 1 compares high school completion rates and college participation for White, African American, and Hispanic students. The percentage of White students at each of the three levels (high school graduate, college enrollee for one or more years, and current college enrollee) is consistently higher than the percentages for the African American and Hispanic students. White students, then, are not only more likely to complete high school and enroll in college, they are also more likely to be retained. Are these inequities only furthered by minority enrollment in community colleges? This complex issue requires further investigation; as it stands, the evidence is ambiguous at best.

Figure 1. High School Completion and College Participation Rates for 18- to 24-Year-Olds, by Race and Ethnicity, 1997 (Source: Wilds, 2000, pp. 9).



Minority students perceive gains from their community college experiences that are, in some instances, beyond the gains reported by White students. African American community college students, for example, perceive greater gains in personal/social development than do their White peers. In addition, Asian students identify "developing perspectives of the world" as a gain more often than White students. The minority populations are distinct from one another in their perceptions of community college benefits. Asian students report greater gains in math, science, and technology than do Hispanic students, while African Americans report stronger career preparation resulting from their community college attendance than do Asian students (Swigart & Ethington, 1998).

BEST COPY AVAILABLE

What factors are associated with minority student success in community colleges? Research has demonstrated that Black student transfer rates are higher at larger schools, when day-care facilities are provided, and when schools are located in affluent communities with a high percentage of Black residents. The transfer rate is lower, though, when Black students are concentrated in particular programs (namely vocational) in predominately White schools (Blau, 1999). Hagedorn, Maxwell, & Hampton (in press) report that grade point average, strength of college goal commitments, number of course credit hours, extent of high school preparation, and perceptions of the need for assistance are positively correlated with the retention of African American males in community colleges. Retention of Asian Pacific Americans is similarly correlated with grade point average and number of credit hours. Additionally, for these students, there is a positive relationship between retention and the extent of financial aid (Makaukane-Drechsel & Hagedorn, 2000). Vazquez & Garcia-Vazquez (1998) suggest Latino/a students' attitudes toward themselves and their community college experiences are strongly related to interactions with the faculty and self-image. Generally, under the right conditions, minority students can benefit from their attendance in community colleges; the experience alone does not automatically hinder them and can result in positive outcomes.

Transfer

According to Table 8, national transfer rates have clustered consistently around 22 percent since 1984. The most recent report from the National Profile of Community Colleges (Phillippe, 2000) claims that, with 47.1 percent of students earning twelve credits or more in 1990, 21.8 percent transferred.

Table 8. *Community College Transfer Rates, 1984 to 1990.*

Year	Percentage Earning Twelve Credits or More	Percentage Transferring Within Four Years
1984	50.5	23.7
1985	46.7	23.6
1986	46.7	23.4
1987	46.9	22.6
1988	45.5	22.1
1989	44.1	21.5
1990	47.1	21.8

Source: National Profile of Community Colleges: Trends and Statistics, 1999, pp. 68.

Several recent studies have attempted to identify the factors that lead to high transfer rates, and also those that contribute to success at the senior institution. Shaw & London (1995), in a study of four urban community colleges with unusually high transfer rates, found that the schools each had an institutional culture that was well suited to the needs, attitudes, and aspirations of the student body. In other words, there was a commonality of purpose between the students and the college, creating an environment in which students could flourish and achieve their goals. Similarly, Striplin (1999) suggests that, in order to enhance the transfer rate for first generation college students, community colleges should provide extensive counseling and advising (with faculty advising as a significant component) in addition to clarifying articulation agreements with senior institutions. Overall, these authors imply that community colleges will improve transfer success by attuning to the challenges faced by their students and by responding with the appropriate service and support.

Beyond the community college, the evidence suggests that transfer students can and do graduate from senior institutions given sufficient time. In fact, a study of Canadian community college students showed that the transferring students did better academically than students entering the four-year college directly from high school. However, the community college students took longer to graduate (Bell, 1998). Employment and mediocre student support services increase the amount of time required for graduation (Glass & Bunn, 1998). Echoing this, Davies & Casey (1999) attest to the importance of a welcoming campus and staff, better training for faculty and staff, standard transfer of credit policies, and improved financial resources for promoting transfer student success. Transfer students who complete the associate degree are more likely than non-completers to persist and graduate from senior institutions. Additionally, transfer students with a 3.0 GPA or better persist and graduate from senior institutions at a rate equal to that of native students (Cejda, Rewey, & Kaylor, 1998).

Assessment and Tracking

Placement testing in community colleges has provoked heated debate in many states. The litigation prompted by this issue centers on the potential threats to access and equity that placement testing and tracking may instigate. In California, legal actions have led to regulations requiring institutions to provide predictive validity evidence for their placement tests and course prerequisites. Also, other measures of student aptitude must be considered for placement purposes. Armstrong (2000) reports that, while correlation coefficients show a statistically significant relationship between placement test score and resulting grades, these coefficients are not practically significant. Likewise, weaker correlation coefficients are found at the lower curriculum levels (i.e. developmental coursework), suggesting little connection between placement test scores and course grades in remedial instruction. Conversely, student

demographic, situational, and especially dispositional variables are strongly related to course grades and retention. In fact, student disposition is a much more powerful predictor of success than test scores.

In another study, Armstrong (1998) analyzes the impact of mandatory prerequisites on student enrollment patterns in the San Diego Community College District. Enforced prerequisites cause declining enrollments in the majority of disciplines. However, within the sciences, enforced prerequisites are correlated with higher course grades and less attrition. Evidence within the social sciences is less clear. Importantly, mandatory prerequisites do not appear to have a systematically negative impact on any particular group.

Student Success and Retention

Student success has been defined in various ways for community college populations as what constitutes "success" changes depending on the widely diverse student intentions. Harris (1998) identifies student goal attainment, course retention, success in course work, fall-to-fall persistence, degree/certificate completion, and placement rate in the work force as indicators of success. Certainly this broad range of indicators is inclusive of the similarly broad purposes of community college enrollees. Palmer (1998) warns, however, that indicators of student progress (i.e. persistence and retention) are not necessarily indicative of institutional quality. He suggests that the context of the community college ought to be considered when interpreting institutional transfer, persistence, or degree completion rates as, for example, a college serving a poor community faces challenges unique from a college in wealthy suburban area.

Factors associated with student retention and success vary depending on the particular student population. Rita (1998) reports that students who were successful following academic suspension from Bronx Community College in New York had better study habits, reported more

dissatisfaction with instructors than non successful students, were active during their time away from school, and were more concerned about finances. Men and women who were academically successful after their suspension were more likely to be married and had higher math placement test scores. Students enrolled in two-year degree programs at an urban commuter campus (which offers both the baccalaureate and associates degrees) were more likely to persist than their bachelor's degree peers. First semester credit hours and first semester GPA significantly predicted non-persistence (Tharp, 1998). Sydow & Sandel (1998) point to work and family conflicts as the primary contributors to attrition at Mountain Empire Community College in Virginia.

While Borglum & Kubala (2000) claim that class withdrawal rates are not correlated with academic and social integration in community colleges, Napoli & Wortman (1998) indicate that academic and social integration have both direct and indirect effects on persistence in college overall. Students who are integrated have stronger goal and institutional commitments, and these in turn influence persistence. Class withdrawal is, however, correlated with a variety of other factors. In tracking student class withdrawal over eight sessions at Santa Monica College in California, Geltner (1996) found that Asian and White males were more likely to withdraw from their courses than Asian and White females. Age was also a predictor; 20- to 24-year-old students had the highest withdrawal rates, while students aged 60 to 64 had the lowest. Students who were not high school graduates tended to withdraw at high rates, while students who worked between one and nine hours per week withdrew at lower than average rates.

Palmer (1998) suggests that policy initiatives can facilitate student success and retention at community colleges. He proposes that colleges be required to report key student progress indicators. Also, he supports earmarking funds for special programs and incentives aimed toward

"at-risk" students. Finally, Palmer affirms that entering students should undergo basic-skills testing and that matriculation policies should be strengthened in order to guide students and encourage progression.

New Issues

A review of the recent literature suggests that the following issues are of considerable significance in community colleges: dual enrollment, reverse transfer, post-college earnings, and student involvement and experiences within community colleges.

Dual Enrollment

Dual enrollment gives high school students the opportunity to earn college credit by completing courses at local two-year institutions. Indications are that, while dual enrollment students comprise a very small percentage of the community college population, their numbers are on the rise. Andrews (2000), citing the National Center for Education Statistics, reports that the number of high school students enrolling in two-year colleges increased from 96,913 in 1993 to 123,039 in 1995 (or from 2.8 percent of the total community college student body to 3.6 percent). Potential growth in the number of high school students enrolling in two-year colleges is likely as there are currently many state initiatives urging dual enrollment. Presently, 38 states have formal dual enrollment programs (Reisburg, 1998). Boswell (2000) anticipates significant increases in the number of high school graduates pursuing higher education ("Tidal Wave Two") and suggests that state policymakers seriously consider funding dual enrollment programs for upper division high school students in order to encourage faster progression through college and the freeing up of space for other students.

Supporters of dual enrollment point to the benefits for seniors of enrolling in college-level courses. Not only will they progress faster through college, but will spend their last year of

high school more productively. The general assumption that high school seniors "loaf around" and engage in "fun and games" while they await graduation leads many to conclude that enrolling in community college courses will curb that tendency and help students maintain an academic focus (Boswell, 2000; Andrews, 2000; Reisberg, 1998). Azinger (2000) points out that concurrent enrollment offers students the opportunity to complete college-level work when their own high schools do not offer advanced placement courses.

Yet, critics of dual enrollment argue that community college coursework lacks rigor (Andrews, 2000). Officials at selective four-year colleges may be hesitant to approve the transfer of credit from two-year institutions. Professors at these schools are attempting to make it more difficult for students to fulfill college requirements while in high school. Advanced placement courses are regarded much more favorably by four-year institutions and receive more weight in the admissions process than do community college credits. Dual enrollment courses may vary in quality, but the advanced placement program follows stringent national guidelines (Reisberg, 1998). Taxpayers in Arizona have also criticized dual enrollment programs claiming that, because the state supports both the K-12 system and the community colleges, dual enrollment students are paid for twice (Boswell, 2000).

Legal implications surrounding dual-enrollment programs are another pertinent issue. Lugg (2000) suggests that the standard of care owed to minors in high school differs from the standard of care owed to adult students in college. High school teachers, in essence, stand in the place of parental figures during school hours, college faculty do not assume this role. Overall, high school students may not enjoy the same degree of protection while enrolled in college classes. Interpersonal interactions with faculty or other adult students are potential sources for problems to arise. Sexual harassment or questionable curricular content are two examples of such

legal liability. Lugg recommends that two-year institutions enrolling minors strengthen their policies addressing sexual harassment and provide parents and students with ample information about course content.

Issues of age discrimination have also arisen in legal cases. According to *Massachusetts Board of Retirement* v. *Murgia* (1976), the U.S. Supreme Court determined that age discrimination would be loosely regulated in comparison to racial discrimination, which requires more extensive justification. Age discrimination is permitted as long as classification by age "rationally furthers" a governmental objective. For public institutions, this mandate will not necessarily legitimize age discrimination; however, the standards are rather vague, leaving much room for interpretation. In 1974, the court case *Miller* v. *Sonoma County Junior College District* upheld the right of two 16 year-olds to attend a community college. The college's age requirement was considered arbitrary and irrational. The judge concluded that the college's exclusion of qualified students based on age was unacceptable (Kaplin, 1985).

Reverse Transfer

In addition to dual-enrollment students, community colleges are also serving individuals who have either earned baccalaureate degrees and are returning to the community college seeking career education and personal fulfillment, or those who were unsuccessful in four-year colleges. These reverse transfer students represent 16 percent of the community college student body in the nation. They occupy enrollment slots, often in the selective programs, sometimes to the detriment of the less academically prepared students without college experience. The various missions of the community college, to afford a "second chance" through remedial and career education and to provide lifelong learning, conflict with the mission of universal access when reverse transfer students are brought into the picture. The infiltration of reverse transfer students

and their consumption of the already scarce resources limits accessibility and opportunity for students who have never attended college. In fact, the admission of post-baccalaureate students may displace some potential first-time students altogether (Townsend, 2000).

Post College Earnings

Sanchez & Laanan (1998) report on outcomes for students completing degrees and certificates from community colleges in California. There is a positive relationship between formal education and earnings; though completing a degree or certificate increases post-college earnings more than taking random courses outside of a coherent program. In their study, certificate completers experienced the greatest benefit (a 15 percent increase in income) and those earning associate's degrees, gains of 11 percent. Younger vocational students (18- to 24-year-olds) had gains of 19 percent during the first to third years out of college, while older vocational students (25- to 34-year-olds and 35-year-olds and older) experienced 12 percent gains. Technical, nursing, and computer programs provide students with the highest post-college earnings. Students in fields requiring more technical training tend to earn more after college than those students in non-technical majors (Laanan, 1998).

A strong positive correlation exists between educational attainment and post-college earnings for economically disadvantaged students. College degrees and certificates contribute to higher earnings for women as well. In fact, among vocational students, as women complete more education, post-college earning differentials between men and women are reduced, though men continue to earn more than women at every level of educational attainment (Sanchez, Laanan, Wiseley, 1999).

Student Experiences and Integration in Community Colleges

What are the notable experiences among students in community colleges? As discussed earlier in the Student Success and Retention section, the evidence regarding the relationship between social integration and academic outcomes is mixed for students in community colleges. The extent of social integration, however, has been studied and the findings are relatively consistent. Overall, students are less involved with their campus compared to students at four-year institutions, participating less frequently in campus organizations and rarely attending campus-sponsored events (Maxwell, 2000). However, Hagedorn, Maxwell, Rodriguez, Hocevar, & Fillpot (2000) indicate that men participate more frequently in campus activities than do their female peers. Perhaps the lack of social integration is related to the extensiveness of many students' work schedules. Table 9 shows that the vast majority of students (both full-time and part-time enrollees) work at least part-time, with half of all students working full-time. Even full-time students are heavily engaged in work activities; overall, 75 percent of them work.

Though both male and female students rarely meet with faculty outside of class, interactions with peers occur more often. Typically, peer interactions for students in community colleges revolve around study sessions or discussions about coursework (Maxwell, 2000). Hagedorn et al. reveal that women, especially, tend to form study groups with other students and also report having less difficulty meeting and making friends than do male students. Overall, women attain higher levels of informal social integration than men.

Table 9. *Employment Status of Community College Students, 1995-96.*

Attendance Status	Percentage
Exclusively Full-Time Enrollment:	
Not Working	24.7
Working Part-Time	45.1
Working Full-Time	30.3
Exclusively Part-Time Enrollment:	
Not Working	13.7
Working Part-Time	31.9
Working Full-Time	54.4
All Students:	
Not Working	16.3
Working Part-Time	33.4
Working Full-Time	50.4

Source: National Profile of Community Colleges: Trends and Statistics, 1999, pp. 48.

Residence halls have not usually been considered critical elements in community colleges. In fact, for much of the past they have been nearly non-existent. Currently only 60 of the nation's 1,050 two-year institutions have on-campus housing. Still, there is a movement, however small at the present, to incorporate this component in community colleges in order to attract and recruit students. Some predict that residence halls will become increasingly common on community college campuses because student demand for campus housing is on the rise and because residence halls offer an enrollment incentive for international students, athletes, and individuals from distant locations (Lords, 1999).

Murrell, Denzine, & Murrell (1998), in their study of 14 community colleges with residence halls, found that students felt generally positive about their residential experience and believed that it facilitated their academic pursuits. Students reported that, by eliminating their commute, they were able to spend more time studying. Study groups with peers were also a

valuable resource as was proximity to campus facilities such as the library and classrooms. Finally, students reported that fewer family distractions improved concentration on their academic endeavors. By and large, residence halls on community college campuses provide opportunities for students to integrate both academically and socially into campus life.

Conclusion

Community college students are increasingly diverse in both identity and intentions. The institutions that serve them face challenges related to admissions policies, legitimacy within the broader system of higher education, and ever-changing enrollment patterns. Overall, authors affirm through the current literature that community colleges offer opportunity more than not, providing students with social mobility as well as the chance to flourish academically and personally.

References

American Association of Community Colleges. (1999). National community college snapshot. All About Community Colleges. Available on the World Wide Web: http://www.aacc.nche.edu/allaboutcc/snapshot.htm

Andrews, H.A. (2000). Lessons learned from current state and national dual-credit programs. New Directions for Community Colleges, Fall 2000 (111), 31-39.

Armstrong, W.B. (1998). Mandatory skill level prerequisites: How are student outcomes affected? A student inquiry approach. San Diego, California: San Diego Community College District. (ED 440 688).

Armstrong, W.B. (2000). The association among student success in courses, placement test scores, student background data, and instructor grading practices. Community College Journal of Research and Practice, 24 (8), 681-695.

Azinger, A. (2000). A K-12 perspective on partnerships with community colleges. New Directions for Community Colleges, Fall 2000 (111), 17-21.

Bell, S. (1998). College transfer students: A Canadian case. Community College Journal of Research and Practice, 22 (1), 21-37.

Blau, J.R. (1999). Two-year college transfer rates of black American students. Community College Journal of Research and Practice, 23 (5), 525-531.

Borglum, K., & Kubala, T. (2000). Academic and social integration of community college students: A case study. Community College Journal of Research and Practice, 24 (7), 567-576.

Boswell, K. (2000). Building bridges or barriers? Public policies that facilitate or impede linkages between community colleges and local school districts. New Directions for Community Colleges, Fall 2000 (111) 3-15.

Cejda, B.D., Rewey K.L., & Kaylor, A.J. (1998). The effect of academic factors on transfer student persistence and graduation: A community college to liberal arts college case study. Community College Journal of Research and Practice, 22 (7), 675-686.

Cohen, A.M., & Brawer, F. (1996). The American Community College. San Francisco: Jossey-Bass Publishers.

Davies, T.G., & Casey, K. (1999). Transfer student experiences: Comparing their academic and social lives at the community college and university. College Student Journal, 33 (1), 60-71.

Foote, E. (1997). Community colleges: General information and resources. ERIC Digest. Los Angeles, California: ERIC Clearinghouse for Community Colleges. (ED 411 929).

Fusch, G.E. (1996). The community college of the 21st century. British Columbia: Canada. (ED 417 771).

Geltner, P. (1996). Class success – class withdrawal. A Research Report. Santa Monica, California: Santa Monica College. (ED 409 041).

Gerald, D.E. (1998). Chapter 2: Higher education enrollment. National Center for Education Statistics: Projections of Education Statistics to 2008. Washington, D.C.: United States Department of Education. Available on the World Wide Web: http://nces.ed.gov/pubs/pj2008/p98c02.html.

Glass, J.C., & Bunn, C.E. (1998). Length of time required to graduate for community college students transferring to senior institutions. Community College Journal of Research and Practice, 22 (3), 239-263.

Goldsmith, D.J., & Archambault, F.X. (1997). Persistence of adult women in a community college re-entry program. Connecticut: United States. (ED 409 958).

Hagedorn, L.S., Maxwell, W., Rodriguez, P., Hocevar, D., & Fillpot, J. (2000). Peer and student-faculty relations in community colleges. Community College Journal of Research and Practice, 24 (7), 587-598.

Hagedorn, L.S., Maxwell W., Hampton, P. (in press). Correlates of retention for African American males in community colleges. Journal of College Student Retention Research, 3 (3).

Harris, B.W. (1998). Looking inward: Building a culture for student success. Community College Journal of Research and Practice, 22 (4), 401-418.

Johnson, L.G., Schwartz, R.A., & Bower, B.L. (2000). Managing stress among adult women students in community colleges. Community College Journal of Research and Practice, 24 (4), 289-300.

Kaplin, W.A. (1985). The Law of Higher Education: A Comprehensive Guide to Legal Implications of Administrative Decision Making. San Francisco: Jossey-Bass Publishers.

Laanan, F.S. (1998). "Descriptive analysis of students' post-college earnings from California community colleges." New Directions for Community Colleges, Winter 1998 (104), 77-87.

Lords, E. (1999). More community colleges are building dormitories. The Chronicle of Higher Education, November 12, 1999.

Lords, E. (2000). Many students are returning to 2-year colleges for technical training, a survey finds. The Chronicle of Higher Education, April 5, 2000.

Lugg, E.T. (2000). Anticipating legal problems when working with high school students. New Directions for Community Colleges, Fall 2000 (111), 83-91.

Makuakane-Drechsel, T., & Hagedorn, L.S. (2000). Correlates of retention among Asian Pacific Americans in community colleges: The case for Hawaiian students. Community College Journal of Research and Practice, 24 (8), 639-655.

Maxwell, W.E. (2000). Student peer relations at a community college. Community College Journal of Research and Practice, 24 (3), 207-217.

Murrell, S.P., Denzine G., & Murrell, P.H. (1998). Community college residence halls: A hidden treasure. Community College Journal of Research and Practice, 22 (7), 663-674.

Napoli, A.R., & Wortman, P.M. (1998). Psychosocial factors related to retention and early departure of two-year community college students. Research in Higher Education, 39 (4), 419-455.

National Center for Education Statistics. (1999). Digest of Education Statistics. Washington, D.C.: United States Department of Education. Available on the World Wide Web: http://nces.ed.gov/pubs2000/digest99/listoftables.html.

Nettles, M.T., & Millett, C.M. (2000). Student access in community colleges. New Expeditions: Charting the Second Century of Community Colleges. Issues Paper No. 1. Washington, D.C.: American Association of Community Colleges (ED 438 872). Available on the World Wide Web: http://199.75.76.25/initiatives/newexpeditions/White_Papers/accesswhite3.htm.

Nora, A. (2000). Reexamining the community college mission. New Expeditions: Charting the Second Century of Community Colleges. Issues Paper No. 2. American Association of Community Colleges: Washington, D.C. Available on the World Wide Web: http://199.75.76.25/initiatives/newexpeditions/White_Papers/accesswhite.htm.

Palmer, J. (1998). Fostering student retention and success at the community college. A Policy Paper. Denver, Colorado: Education Commission of the States, Center for Community College Policy. (ED 439 768). Available on the World Wide Web: http://www.communitycollegepolicy.org/html/publications.htm.

Phelan, D.J. (2000). Enrollment policy and student access at community colleges. A Policy Paper. Denver Colorado: Education Commission of the States, Center for Community College Policy.

Phillippe, K.A., & Patton, M. (1999). National Profile of Community Colleges: Trends and Statistics. 3rd Edition. Washington, D.C.: Community College Press, American Association of Community Colleges.

Reisburg, L. (1998). Some professors question programs that allow high-school students to earn college credits. Chronicle of Higher Education, 44 (42), A39-A40.

Rendón L. (2000). Fulfilling the promise of access and opportunity: Collaborative community colleges for the 21st century. New Expeditions: Charting the Second Century of Community Colleges. Issues Paper No. 3. American Association of Community Colleges: Washington, D.C. Available on the World Wide Web: http://199.75.76.25/initiatives/newexpeditions/White_Papers/accesswhite2.htm.

Rita, E.S. (1998). Characteristics of successful students readmitted following academic suspension. Community College Journal of Research and Practice, 22 (5), 519-529.

Sanchez, J.R., and Laanan, F.S. (1998). Assessing the post-college earnings of students: Benefits of attending California community colleges. AIR 1998 Annual Forum Paper. Minneapolis, Minnesota: May 17-20, 1998. (ED 422 822).

Sanchez, J.R., Laanan, F.S., & Wiseley, W.C. (1999). Post-college earnings of former students of California community colleges: Methods, analysis, and implications. Research in Higher Education, 40 (1), 87-113.

Shaw, K.M., & London, H.B. (1995). Negotiating class and cultural boundries: Toward an expanded definition of the transfer process. ASHE Annual Meeting Paper. Orlando, Florida: November 2-5, 1995. (ED 391 432).

Striplin, J.J. (1999). Facilitating transfer for first-generation community college students. ERIC Digest. Los Angeles, California: ERIC Clearinghouse for Community Colleges. (ED 430 627).

Swigart, T.E., & Ethington, C.E. (1998). Ethnic differences in estimates of gains made by community college students. Community College Journal of Research and Practice, 22 (8), 703-713.

Sydow, D.L., & Sandel, R.H. (1998). Making student retention an institutional priority. Community College Journal of Research and Practice, 22 (7), 635-643.

Tharp, J. (1998). Predicting persistence of urban commuter campus students utilizing student background characteristics from enrollment data. Community College Journal of Research and Practice, 22 (3), 279-294.

Townsend, B.K. (2000). Rationales of community colleges for enrolling reverse transfer students: A second chance for whom? Community College Journal of Research and Practice, 24 (4), 301-311.

Vázquez, L.A., & Garcia-Vázquez, E. (1998). The impact of a differential social power system on Latinos' attitudes toward the high school and the community college experience. Community College Journal of Research and Practice, 22 (5), 531-540.

Voorhees, R.A., & Zhou, D. (2000). Intentions and goals at the community college: Associating student perceptions and demographics. Community College Journal of Research and Practice, 24 (3), 219-232.

Wilds, D.J. (2000). Minorities in Higher Education: Seventeenth Annual Status Report. American Council on Education.

Windham, P. (1997). Gender bias. Florida: Florida Community College System. (ED 413 935).